

## METHOD OF AND SYSTEM FOR FAULT-TOLERANT INDEXING

### ABSTRACT OF THE DISCLOSURE

The dictionary entry is stored in the fifteen combinations formed by the central index and five adjacent decoding spheres. A data dictionary uses a reverse error correction code to identify near matches. A preferred embodiment of the data dictionary utilizes pairwise combinations of a central index decoding sphere and all adjacent decoding spheres (each identified as a vector defining the center of the decoding sphere) to form sets of hash indices into which a dictionary entry is stored. Thus, in the case of dictionary entries at a distance two from the center of a particular central index decoding sphere, the twenty-one adjacent decoding spheres are located and identified by their respective center points or vectors describing the center points of these spheres. In the case of dictionary entries at a distance three, five adjacent decoding spheres are identified. The dictionary entry is stored (or searched for) in the twenty-one combinations formed by a lexicographic ordering of pairs of the central index decoding sphere with the twenty-one adjacent decoding spheres. Likewise, in the case of distance three entries.

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